

Managing Influenza-Like Illness in Outpatient Settings during A Pandemic:  
Interim Recommendations

Guidelines for clinical management of atypical influenza are under development. Much is still unknown about avian influenza viruses and how human infection is best managed. For now, the best reference is the U.S. Department of Health & Human Services document *HHS Pandemic Influenza Plan: Supplement 5 Clinical Guidelines*, which can be found at <http://www.hhs.gov/pandemicflu/plan/sup5.html#s5-IV>.

National guidelines are expected to change. Public Health–Seattle & King County will post the most current recommendations (or links to them), together with specific local information for clinicians, at <http://www.metrokc.gov/health/pandemicflu/index.htm>.



## ***Influenza A H5N1***

### ***Revised Guidelines for Testing at the Public Health Laboratories***

---

#### **Revised guidelines for screening patients with suspected H5N1**

Influenza A H5N1 is causing widespread outbreaks among wild and domestic birds in Africa, Asia and Europe. As of June 2006, the World Health Organization (WHO) reports more than 200 human H5N1 infections with a 50% mortality rate. Person-to-person transmission of H5N1 is rare, inefficient and not sustained. Virtually all human infections result from contact with infected domestic birds. H5N1 infection may occur among travelers from affected areas and should be suspected among those with serious respiratory infections.

**To rapidly detect and control imported H5N1, we are asking healthcare providers to notify their local health department immediately regarding:**

- 1. Patients with severe, febrile (documented fever  $\geq 100.4^{\circ}\text{F}$  [ $38^{\circ}\text{C}$ ]) respiratory disease, including pneumonia or acute respiratory distress syndrome (ARDS), for which no alternative cause is established AND**
  - **Worked with live H5N1 virus within 10 days of onset OR**
  - **Traveled to areas reporting avian or human H5N1 within 10 days of onset AND**
    - **Touched sick or dead poultry OR**
    - **Touched surfaces contaminated with their excretions OR**
    - **Consumed raw or incompletely cooked poultry OR**
    - **Touched sick or dead wild birds suspected to have H5N1 OR**
    - **Had close contact with a person confirmed or suspected to have H5N1 or who was hospitalized with and/or died of a severe, unexplained respiratory illness**
- 2. For patients with milder febrile illness and respiratory symptoms (cough, sore throat or shortness of breath) and the above risk factors, testing will be considered on a case-by-case basis.**

Infection control for patients with suspected or confirmed H5N1 should include standard and droplet precautions. Airborne precautions should be used for procedures that may aerosolize respiratory secretions.

We encourage providers to obtain travel histories from patients with severe respiratory illness. Multiple countries in African, Asian and European have reported human and/or avian H5N1. Updated information on H5N1 activity is available on the WHO and Centers for Disease Control and Prevention (CDC) websites:

WHO: [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

CDC: <http://www.cdc.gov/flu/avian/index.htm>

**For additional information about testing patients in King County, contact Public Health–Seattle & King County at (206) 296-4774.**

## ***Influenza A H5N1***

### ***Revised Guidelines for Testing at the Public Health Laboratories***

---

#### **Laboratory diagnosis of suspected H5N1 influenza**

- Public Health–Seattle & King County will facilitate diagnostic testing at the Washington State Department of Health Public Health Laboratories (PHL). Call 206-296-4774 to arrange testing.
- The PHL performs H antigen subtyping of influenza by polymerase chain reaction (PCR) assay and can identify the strain of highly pathogenic H5N1 currently causing avian influenza in Africa, Asia and Europe.
- H5N1 has pandemic potential; specimens identified as influenza A H5 or another novel subtype will go to CDC for further identification and viral isolation under enhanced biosafety level 3 conditions.
- To maximize the detection of influenza, collect respiratory specimens within three days of symptom onset. Oropharynx and lower respiratory tract specimens have the highest yield for H5N1, however aerosolization of virus can occur during procedures to obtain lower respiratory tract specimens.
- Collect at least one of the following specimens for viral isolation and PCR:
  1. Oropharyngeal (OP) swab is the easiest method and has the highest yield
  2. Bronchoalveolar lavage (BAL) for patients who require BAL for diagnosis
  3. Tracheal aspirate for patients on mechanical ventilation if an OP swab cannot be obtained
  4. Nasopharyngeal swab or aspirate are the least desirable specimens
- Serum antibody testing can be useful if respiratory specimens cannot be obtained; collect an acute specimen within seven days of onset and a convalescent specimen 2-4 weeks following the acute specimen.
- The results of rapid influenza testing kits should be interpreted with caution; the sensitivity of these kits are low, while a reactive test will not distinguish seasonal from avian or other novel -influenza strains.

***Please do not submit specimens to a commercial laboratory, which can delay confirmation of H5N1 infection.***

***Detailed instructions for collecting and transporting specimens follow.***

**For additional information about testing patients in King County, contact Public Health–Seattle & King County at (206) 296-4774.**

## Influenza A H5N1

### Revised Guidelines for Collection and Transport of Specimens for Influenza H5N1 Testing at the Public Health Laboratories

*Always perform diagnostic procedures using appropriate infection control precautions  
PHL will not accept specimens without notification and approval of your local health department*

#### Oropharyngeal swab specimen collection\*

1. Use only sterile Dacron or rayon swabs with wire or plastic shafts. Swab posterior oropharynx and tonsillar area, avoiding the tongue.
2. Place swab immediately into a sterile vial containing 2 mL of viral transport media. Break off or bend applicator shaft to close vial tightly.
3. Label vial with patient's name, specimen source and date obtained.

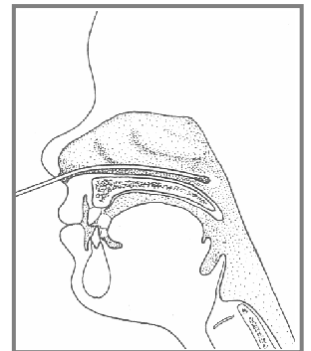
#### Bronchoalveolar lavage or tracheal aspirate specimen collection\*

1. During lavage or aspirate, use a double-tube system.
2. Centrifuge half of the specimen, and fix cell pellet in formalin. Place remaining unspun fluid in sterile vials with external caps and internal O-ring seal, then seal tightly with the available cap and secure with adhesive tape.
3. Label each specimen with patient's name, specimen source and date obtained.

***Oropharyngeal or lower respiratory specimens are preferred; collect nasopharyngeal specimens only when OP, BAL or tracheal aspirate specimens cannot be obtained***

#### Nasopharyngeal (NP) swab specimen collection\*

1. Use only sterile Dacron or rayon swabs with wire shafts. Insert swab into one nostril parallel to the palate until resistance is met by contact with the nasopharynx. Leave swab in for a few seconds. If possible, collect from other nostril with the same swab.
2. Place swab immediately into sterile vials containing 2 mL of viral transport media. Break off or bend applicator shaft to close vial tightly.
3. Label vial with the patient's name, specimen source and date obtained.



#### Nasopharyngeal (NP) aspirate specimen collection\*

1. Place patient with head tilted slightly backward.
2. Instill 1-1.5 mL of nonbacteriostatic saline into one nostril.
3. Flush a plastic catheter with 2-3 mL of nonbacteriostatic saline.
4. Insert catheter into nostril parallel to the palate until resistance is met by contact with the nasopharynx. Aspirate the NP contents. If possible, repeat with the other nostril.
5. Instill the aspirate into sterile vials and label vials with the patient's name, specimen source and date obtained.

*\*Multiple specimens can be combined in a single viral medium transport tube.*

**For additional information about testing patients in King County, contact Public Health–Seattle & King County at (206) 296-4774.**



## Influenza A H5N1

### Revised Guidelines for Collection and Transport of Specimens for Influenza H5N1 Testing at the Public Health Laboratories

*Always perform diagnostic procedures using appropriate infection control precautions*  
*PHL will not accept specimens without notification and approval of your local health department*

#### Blood specimen collection

1. Antibody testing requires both acute (<7 days of onset) and convalescent (2-4 weeks after onset) serum specimens.
2. Collect 5-10 cc of whole blood in a serum separator tube. Allow blood to clot, centrifuge briefly, and collect all sera in vials with external caps and internal O-ring seals. If no O-ring vials are available, seal existing cap with adhesive tape.
3. The minimum amount of serum needed for testing is 200  $\mu$ l.
4. For pediatric patients, a minimum of 1 cc of whole blood is needed. Ideally, collect 1 cc in a serum separator and 1 cc in an EDTA tube. If only 1 cc can be collected, collect in a serum separator.
5. Label each specimen with patient's name and date obtained.

**Storage:** All respiratory and blood specimens should be refrigerated immediately after collection at 4°C until ready for transport. Transport on ice packs. Respiratory specimens held for more than 36 hours should be frozen to -70°C and shipped on dry ice.

Each specimen must be accompanied by a completed PHL **Viral Examination Form** which includes:

**Patient name**  
**Specimen collection date**  
**Date of symptom onset**

**Source of specimen**  
**Test requested**  
**Submitter name, mailing address**

**Packaging:** Pack and label specimens as Diagnostic or Clinical Specimens. Pack and label viral isolates as Infectious Substances, UN 2814. Pack and ship according to United States Department of Transportation and United States Postal Service regulations. Specimens that leak in transit or do not have appropriate patient identification on the vial/tube will be rejected. Specimens without collection date, submitter name and address or requested test will be delayed for reporting until the missing information is received.

**Transport:** Every attempt should be made to transport specimens to the PHL on ice packs within 24 hours of collection. Public Health will facilitate transport of specimens at this time.

**For additional information about testing patients in King County, contact Public Health–Seattle & King County at (206) 296-4774.**

## Preventing the Spread of Influenza

Most patients with pandemic influenza will be able to remain at home during the course of their illness and can be cared for by family members or others who live in the household. This information is intended to help families and caregivers recognize the symptoms of influenza and care for ill persons in the home, both during a typical influenza season and during an influenza pandemic.

At the outset of an influenza pandemic, a vaccine for the *pandemic* flu virus will not be available for several months. However, it's still a good idea to get a *seasonal* flu vaccine to protect from seasonal flu viruses (see Influenza Vaccine Information Sheet).

### Know the Symptoms of Influenza, which may include:

- Sudden onset of illness
- Fever higher than 100.4° F (38° C)
- Chills
- Cough
- Headache
- Sore throat
- Stuffy nose
- Muscle aches
- Feeling of weakness and/or exhaustion
- Diarrhea, vomiting, abdominal pain (occur more commonly in children)

### Prevent the Spread of Illness in the Home

Because influenza can spread easily from person to person, anyone living in or visiting a home where someone has influenza can become infected. For this reason, it is important to take steps to prevent the spread of influenza to others in the home.

### What Caregivers Can Do

- Physically separate influenza patients from other people as much as possible. When practical, the ill person should stay in a separate room where others do not enter. Other people living in the home should limit contact with the ill person as much as possible.
- Designate one person in the household as the main caregiver for the ill person. Ideally, this caregiver should be healthy and not have medical conditions that would put him or her at risk for severe influenza disease. Medical conditions that are considered "high risk" include the following:
  - Pregnancy
  - Diabetes
  - Heart problems
  - Chronic lung disease, including asthma, emphysema, cystic fibrosis, chronic bronchitis, bronchiectasis and tuberculosis (TB)
  - Kidney disease
  - Disease or treatment that suppresses the immune system
  - Age over 65.
- Watch for influenza symptoms in other household members.
- If possible, contact your health care provider if you have questions about caring for the ill person. However, it may be difficult to contact your usual healthcare provider during a severe influenza pandemic. Public Health–Seattle & King County's pandemic flu website (listed below) will provide frequent updates, including how to get medical advice. If special telephone hotlines are used, these numbers will also be on the website and announced through the media.

- Wearing surgical masks (with ties) or procedure masks (with ear loops) may be useful in decreasing spread of influenza when worn by the patient and/or caregiver during close contact (within 3 feet). If masks are worn, to be useful they must be worn at all times when in close contact with the patient. The wearing of gloves and gowns is not recommended for household members providing care in the home.

#### **What Everyone in the Household Can Do**

- Wash hands with soap and water or use an alcohol-based hand cleanser (like Purell® or a store-brand) after each contact with an influenza patient or with objects in the area where the patient is located. Cleaning your hands is the single best preventive measure for everyone in the household.
- Don't touch your eyes, your nose, or your mouth without first carefully washing your hands. Wash hands before and after using the bathroom.
- Wash soiled dishes and eating utensils either in a dishwasher or by hand with warm water and soap. It's not necessary to separate eating utensils used by a patient with influenza.
- Laundry can be washed in a standard washing machine with warm or cold water and detergent. It is not necessary to separate soiled linen and laundry used by a patient with influenza from other household laundry. Do not "hug" the laundry, in order to avoid contamination. Wash hands with soap and water after handling soiled laundry.
- Place tissues used by the ill patient in a bag and throw them away with other household waste. Consider placing a bag at the bedside for this purpose.
- Clean counters, surfaces and other areas in the home regularly using everyday cleaning products.

#### **Prevent the Spread of Illness in the Community**

- Stay at home if you are sick. Ill persons should not leave the home until they have recovered because they can spread the infection to others. In a typical influenza season, persons with influenza should avoid contact with others for about 5 days after onset of the illness. During an influenza pandemic, public health authorities will provide information on how long persons with influenza should remain at home.
- If the ill person must leave home (such as for medical care), he or she should wear a surgical or procedure mask, if available, and should be sure to take the following steps:
  - Cover the mouth and nose when coughing and sneezing, using tissues or the crook of the elbow instead of the hands.
  - Use tissues to contain mucous and watery discharge from the mouth and nose.
  - Dispose of tissues in the nearest waste receptacle after use or carry a small plastic bag (like a zip-lock bag) for used tissues.
  - Wash hands with soap and water or use an alcohol-based hand cleanser after covering your mouth for a cough or sneeze, after wiping or blowing your nose, and after handling contaminated objects and materials, including tissues.
- During an influenza pandemic, only people who are essential for patient care or support should enter a home where someone is ill with pandemic influenza unless they have already had influenza.
- If other persons must enter the home, they should avoid close contact with the patient and use the infection control precautions recommended on this sheet.

**This guidance is based on current information from the U.S. Department of Health & Human Services Pandemic Influenza Plan and is subject to change. Up-to-date guidance will be available from your healthcare provider and at these websites:**

**Public Health – Seattle & King County:** <http://www.metrokc.gov/health/pandemicflu>

**Official U.S. Government pandemic flu website:** <http://www.pandemicflu.gov/plan/tab3.html>



## How to Care for Someone with Influenza

During a severe influenza outbreak or pandemic, the media and healthcare providers will notify residents of King County with instructions for obtaining medical advice and receiving medical care. The following information is a general guide and is not intended to take the place of medical advice from a healthcare provider.

- Keep a care log. Record the following information about the ill person at least once each day or more often as symptoms change, along with the date and time.
  - Check the patient's temperature
  - Check the patient's skin for color (pink, pale or bluish?) and rash
  - Record the approximate quantity of fluids consumed each day and through that night
  - Record how many times the ill person urinates each day and the color of the urine (clear to light yellow, dark yellow, brown, or red)
  - Record all medications, dosages and times given
- Keep the ill person as comfortable as possible. Rest is important.
- Keep tissues and a trash bag for their disposal within reach of the patient.
- Make sure the patient avoids drinking alcohol and using tobacco. Smoking should not be allowed in the home.
- Use ibuprofen or acetaminophen or other measures, as recommended by your healthcare provider, for fever, sore throat and general discomfort.
- Do not use aspirin in children or teenagers with influenza because it can cause Reye's syndrome, a life-threatening illness.
- Keep in mind that fever is a sign that the body is fighting the infection. It will go away as the patient is getting better. Sponging with tepid (wrist-temperature) water may lower the patient's temperature, but only during the period of sponging. Do not sponge with alcohol.
- If the patient is not vomiting, offer plenty of fluids to prevent dehydration, even if he or she does not feel thirsty. Offer small amounts of fluid frequently. If the ill person is not eating solid foods, include fluids that contain sugars and salts, such as broth or soups, sports drinks, like Gatorade® (diluted half and half with water), Pedialyte® or Lytren® (undiluted), ginger ale and other sodas, but not diet drinks. Regular urination is a sign of good hydration.
  - Recommended minimum daily fluid intake, if not eating solid food:  
Young children – 1 ½ oz. per pound of body weight per day  
(Example: A 20 lb. child needs approximately 30 oz. fluid per day)
  - Older children and adults – 1 ½ to 2 ½ quarts per day
- If the patient is vomiting, do not give any fluid or food by mouth for at least 1 hour. Let the stomach rest. Next, offer a clear fluid, like water, in very small amounts. Start with 1 teaspoon to 1 tablespoon of clear fluid every 10 minutes. If the patient vomits, let the stomach rest again for an hour. Again, try to give small frequent amounts of clear fluid. When there is no vomiting, gradually increase the amount of fluid offered and use fluids that contain sugars and salts. After 6-8 hours of a liquid diet without vomiting, add solid

## Appendix E

food that is easy to digest, such as saltine crackers, soup, mashed potatoes or rice. Gradually return to a regular diet.

- Babies who are breast-fed and vomiting can continue to nurse. Feed smaller amounts more often by breast-feeding on only one breast for 4-5 minutes every 30-60 minutes or by offering teaspoonfuls of Pedialyte® or Lytren® every 10 minutes.
- Watch for signs of dehydration –
  - Weakness or unresponsiveness
  - Decreased saliva/dry mouth and tongue
  - Skin tenting: check this by picking up layers of skin between your thumb and forefinger and gently pinching for 1 second. Normally, the skin will flatten out into its usual shape right away. If patient is dehydrated, the skin will “tent” or take 2 or more seconds to flatten out. This is best checked on the belly skin of a child and on the upper chest of an adult.
  - Decreased output of urine, which becomes dark in color from concentration. Ill persons who are getting enough fluids should urinate at least every 8-12 hours.
- If the ill person is dehydrated, give sips or spoonfuls of fluids frequently over a 4-hour period. Watch for an increase in urination, a lighter color of the urine and improvement in the patient’s overall condition. These are signs that the increased fluids are working.

Children under 5 years: Give 1 ounce fluid per pound body weight over 4 hours  
(Example: A child who weighs 20 lb. needs 20 oz. or 2-3 cups over 4 hours)

Older children & adults will need 1-2 quarts of fluids over the first 4 hours

- Watch for complications of influenza. Complications are more common in individuals with health conditions such as diabetes, heart and lung problems, but may occur with anyone who has the flu. Call your healthcare provider or the pandemic flu hotline if the ill person:
  - Has difficulty breathing, fast breathing, or bluish color to the skin or lips
  - Begins coughing up blood
  - Shows signs of dehydration and cannot take enough fluids
  - Does not respond or communicate appropriately or appears confused
  - Complains of pain or pressure in the chest
  - Has convulsions (seizures)
  - Is getting worse again after appearing to improve
  - Is an infant younger than 2 months old with fever, poor feeding, urinating less than 3 times per day or other signs of illness

At a stressful time when your family is trying to cope with illness and uncertainty, keep in mind that the most basic precautions and attention to the patient’s symptoms will really help. Most patients with influenza can receive the care they need at home.

### Other resources:

**Public Health – Seattle & King County:** <http://www.metrokc.gov/health/pandemicflu>

**Individuals and Families Planning:** <http://www.pandemicflu.gov/plan/tab3.html>

**Influenza Symptoms, Protection and What to Do If You Get Sick:**  
<http://www.cdc.gov/flu/symptoms.htm>

## Family Health Information Sheet

If there is a flu pandemic or other medical emergency, a list of health information about your family will be important. Fill in information for each family member in the space provided. Make copies for your home, your car(s), children's school(s) and your places of work.

### 1. Family Member Information

Home address \_\_\_\_\_ Phone  
# \_\_\_\_\_

Family Member	Allergies	Medical Conditions	Medication	Dosage

## 2. Emergency Contacts

Contacts	Name & Phone Number
<b>Local</b> personal emergency contact	
<b>Out-of-town</b> personal emergency contact	
Hospitals near: Home	
Work	
School(s)	
Family physician(s)	
Specialist(s) (including counselors)	
Public Health - Seattle & King County	<b>Communicable Disease Hotline: (206) 296-4949</b>
Pharmacy	
Employer(s) contact and emergency information	
School(s) contact and emergency information	
Religious/spiritual organization	
Veterinarian	

## **Influenza Vaccine Information Sheet**

### **Why is flu vaccine recommended each year?**

- Because influenza viruses change from year to year, a new vaccine is needed to provide protection against the new flu viruses that are expected each year.
- A vaccination encourages the body's immune system to develop immunity to the types of flu virus contained in the vaccine.

### **What types of flu vaccine are available?**

- Two types of flu vaccine are available.
  - The traditional flu shot (injectable vaccine) contains inactivated (killed) virus. It is licensed for anyone aged 6 months and older. There is no live virus in this vaccine. This type of vaccine is recommended for people with high risk medical conditions (see below).
  - A live weakened virus vaccine (LAIV) that is sprayed into the nose (intranasal) is licensed for non-pregnant, healthy people ages 5 to 49 years. At this time the nasal spray vaccine is not recommended for high risk groups.
- Flu shots are 70 - 90% effective in preventing or reducing the symptoms of the flu in healthy adults.
- It takes about 2 weeks after vaccination for your body to develop protection that lasts through the flu season, then gradually decreases.

### **Who should get flu vaccine?**

People who are at high risk of complications if they get influenza disease should be vaccinated. People with the following conditions are considered at "high risk:"

- Chronic lung disease
  - asthma
  - emphysema
  - chronic bronchitis
  - bronchiectasis
  - tuberculosis
  - cystic fibrosis
- heart disease
- chronic kidney disease
- chronic metabolic disorders, including diabetes
- severe anemia
- diseases or treatments that depress immunity
- persons with any condition that can interfere with breathing or increase the risk of choking, including seizure disorders
- residents of a nursing home or other chronic care facility
- children 6 through 23 months of age
- persons aged 2-64 years with chronic medical conditions or on long-term aspirin therapy
- persons aged 65 years and older, with or without chronic medical conditions
- pregnant women who will be in their second or third trimester during the flu season

## Appendix E

To protect high risk people, adults and children who live, work, or may come in contact with people at high risk should be vaccinated each year, including the following:

- household contacts and out-of-home caregivers of children aged less than 6 months
- adults and children aged 2 years and older who live, work or may come in contact with people at high risk.
- physicians, nurses, or other providers of care to high-risk persons

When there is enough flu vaccine, all persons should consider vaccination to prevent the flu, or at least reduce its symptoms.

### **What will be my reaction to the flu vaccine?**

- Most people have little or no reaction to the vaccine.
- One in four may have a swollen, red, tender area where the vaccination shot was injected.
- A much smaller number may develop a slight fever within 24 hours and may have chills, headache, or feel a little sick.
- People who already have a respiratory disease may find their symptoms worsened.
- Usually none of these reactions lasts for more than a couple of days.
- Adverse reactions to the vaccine have been observed in some people, but are rare.
- People who have demonstrated egg protein allergy should be vaccinated under close supervision of a physician and only if their own physician believes it necessary.

### **When should I get the flu vaccine?**

Influenza activity usually begins in late December and early January. October and November are the best months to get the influenza vaccine, but you can get it throughout the influenza season (which usually ends in the spring).